

TRI-CITIES URBAN AREA

SEPT 1979

BEGIN BIKE ROUTE

BIKEWAYS PLAN

INTRODUCTION

Since 1974, the Tri-Cities Area Transportation Study Policy and Technical Committees have annually approved the Crater Planning District Commission Transportation Work Program for the preparation of a Regional Bikeway Plan and a program of continuous bike-way planning for the Tri-Cities Area.

The Unified Transportation Work Program for the Crater Planning District Commission is a multi-modal document dealing with the relationship between all modes of transportation. Recommended bikeways that were planned, mapped and investigated for each jurisdiction in the Crater Planning District Commission prepared the Tri-Cities Area Bikeway Plan in 1975. Accompanying the plan was a report brochure of proposed bikeway facilities.

As part of the continuous nature of the bikeway-planning effort, the Crater Planning District Commission has updated the 1975 report brochure with the cooperation of the Tri-Cities Area Transportation Study Policy and Technical Committees, as well as local jurisdictions. This has been done not only to reflect the recent growth of bicycle facilities in the Tri-Cities Area, but also in response to the increasing demand from bicyclists and motorists for greater safety awareness.

Purpose

The 1975 Bikeway Plan evaluated the growing concern and interest in bicycle ridership; the methods of planning and designing bikeways; various procedures for implementation; estimated costs in providing bikeways; and potential sources of funding for bicycle facilities. Recommended bikeways that were planned, mapped and investigated for each jurisdiction in the original Bikeways Plan have been adopted by localities. The City of Hopewell, for example, has recently approved a 25-mile bicycle route system.

Goals and Objectives

A number of studies of bicycle routes have been conducted, and in several instances, slightly different interpretations have been made of the type of bicycle facility described. To eliminate the possibility of misinterpretation, the definitions of the terms used herein are as follows:

Bicycle - A bicycle is a device upon which any person may ride, propelled by a human, powered by a chain, belt, or gears and having either two or three wheels in a tandem or tricycle arrangement.

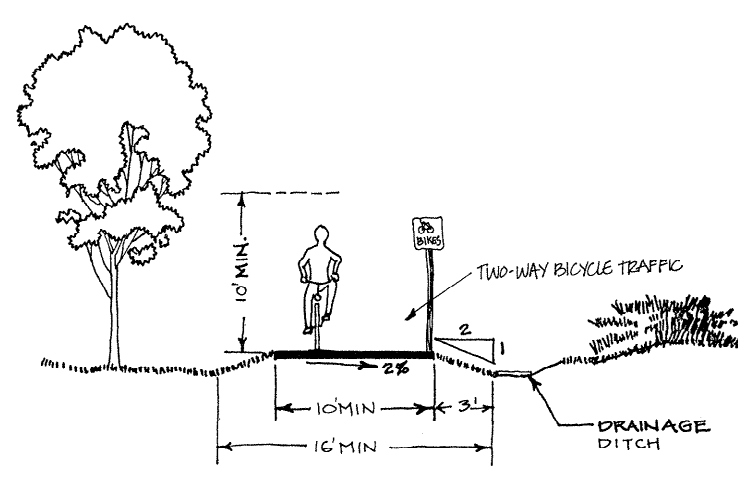
Bikeway - Any road, street, path or way which is specifically designated as being open to bicycle travel, regardless of whether such facility is designated for the exclusive use of bicycles or is to be shared with other transportation modes.

Bicycle Path or Trail (Class I) - A path or trail is physically separated from a roadway and is generally marked by signs. The path or trail is for the exclusive use of bicycles, and it may be paved or unpaved.

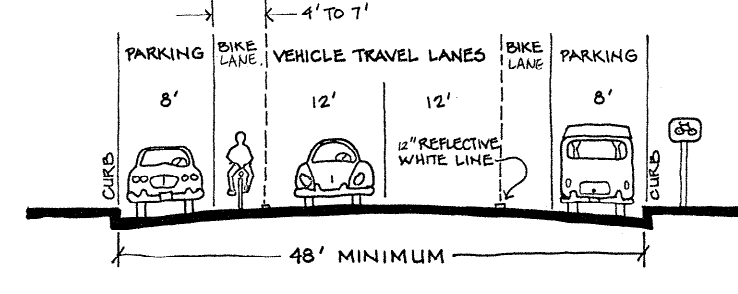
Bicycle Lane (Class II) - A portion of the roadway set aside for exclusive bicycle use. The bicycle lane is usually marked by signs and is distinguished from the portion of the roadway open for motor vehicle traffic by stripes, curbs, parking blocks or other similar devices. Parking may be allowed in the lane although it is undesirable.

Bicycle Route (Class III) - A shared roadway officially designated and marked by signs as a bicycle route but is open to motor-vehicle travel. Parking may or may not be allowed, and there is no provision made for physical separation of travel modes.

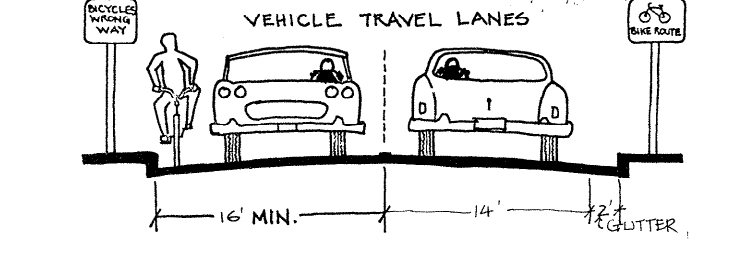
BIKE PATH CLASS I



BIKE LANE CLASS II



BIKE ROUTE CLASS III



Goals and Objectives

The following goals and objectives for the proposed planning and development of a bikeway system are the culmination of discussions with local officials, local administration, school officials, traffic-safety committees and the local bicyclists association. The specific responsibility and concern for the goals and objectives is to obtain a usable set of guidelines that can be followed in the preparation of this study and its eventual implementation.

- GOAL: TO ESTABLISH A BIKEWAY SYSTEM IN TRI-CITIES URBAN AREA**
 - Objective: To prepare a bikeway plan for the Tri-Cities Urban Area**

Policy: To research local needs for bikeways and delineate a bikeway system to meet these needs.

Policy: Coordinate with the local jurisdictions and other interested groups for their awareness, interest and ideas.

Policy: To use existing Policy and Technical Committees as a means of evaluating regional bike-way problems.

Policy: To follow the guidelines recommended by the Federal Highways Administration in "Bicycle and Pedestrian Considerations in Urban Areas" in establishing and implementing a bikeways system.
 - Objective: Develop a system of bicycle routes, trails, lanes, and paths throughout the Tri-Cities Urban Area**

Policy: Where at all possible utilize existing bikeways in conjunction with proposed routes wherever possible.

Policy: Provide connecting routes between all of the jurisdictions in the study area wherever possible.

Policy: Encourage the design and development of inter-jurisdictional bikeways to be a continuous system and provide loop routes for different return trips.

Policy: Encourage the routing of bikeways through and along aesthetic and scenic landscaped areas, whenever possible.

Policy: Provide an estimated cost breakdown of developing bikeway routes.

Policy: Request the State Highway Department to include provision for bikeways along all future highway construction.

Policy: Develop a method of researching State and Federal funding sources to assist local governments in the financing of bikeways.
 - Objective: Provide bikeways that are direct, convenient, safe and easy to use.**

Policy: Develop a system of bikeway graphics that clearly identifies bikeways, and gives instruction as to their proper uses. Bikeways signs, maps and painted lanes will surface in most cases.

Policy: Encourage affected local jurisdictions to maintain and provide interested citizens with appropriate mapping of the bikeway system.

Policy: Develop a bikeway system that will be convenient to all sections of each jurisdiction.

Policy: Encourage use of roadway-maintenance funds to improve current routes along which bicycles are ridden by realigning grades, repairing potholes, making traffic signals more responsive to bicycles, etc.

II. GOAL: TO ENCOURAGE THE USE OF THE BICYCLE AS AN ALTERNATE MEANS OF EVERYDAY TRANSPORTATION

- Objective: Provide bicycle access to and within the study areas' major generators of bicycle and automotive traffic.**

Policy: Encourage inclusion of all bicycle ways to connect major park, recreation and school sites.

Policy: Wherever possible encourage bicycle paths or trails within the confines of the parks, recreational areas and school sites.

Policy: Connect all major commercial areas (shopping centers and central business districts) with convenient residential areas along safe transportation routes.
- Objective: Give priority to establishing bikeways that link major commuter-roadway systems along congested highways.**

Policy: Encourage use of roadway-maintenance funds to improve current routes along which bicycles are ridden by realigning grades, repairing potholes, making traffic signals more responsive to bicycles, etc.
- Objective: Provide support facilities and services for commuter bicyclists.**

Policy: Provide a means of alerting motorists to be especially aware of bicyclists during congested morning and evening commuter traffic.

Policy: Encourage bicycle-parking facilities in all new commercial developments along bikeways.

Policy: Encourage bicycle-parking facilities in all new apartment complexes, schools, parks, churches, hospitals, public buildings, and other areas of large gatherings.

Policy: Encourage the construction of bicycle-parking facilities in all of the existing areas mentioned above.

III. GOALS: TO MAKE BICYCLING SAFER IN THE TRI-CITIES URBAN AREA

- Objective: Develop a comprehensive public-awareness program involving bicyclists, motorists and pedestrians on the use and safety of bikeways.**

Policy: Expand the bicycle-safety education program in public schools.

Policy: Utilize existing civic clubs and associations, as well as local police and sheriff's departments, for the continuation of bicycle-safety clinics.

Policy: Utilize media of television, radio, newspapers, magazines and study-area mailings in order to promote a public-awareness program for bicycle safety.
- Objective: Increase enforcement of traffic laws relating to bicycles and laws relating to motorists violating bikeway laws.**

Policy: The bicycle safety-enforcement program must be applied to children as well as to adults.

Policy: The enforcement system must serve a dual purpose--for education and as a deterrent.

Policy: Develop a Bicycle Peer Court (on Saturdays and held by teenagers) for offenders such as those being used throughout the country successfully.

Policy: Promote citizen participation in planning, encouraging bicycle-safety education and public-awareness programs.

Recommendations

Realizing the growing usage of bicycles, congested roadways, and energy-conservation needs, the original Tri-Cities Urbanized Area Plan was prepared so that local jurisdictions would have guidelines and suggested routes to consider for their bikeway-planning needs. The City of Hopewell, for example, used the plan as the foundation for the bikeway effort there. The purpose and recommendations of this 1979 update to the Bikeways Plan remain unchanged.

By utilizing the bikeway studies prepared by the Federal Highways Administration and the Virginia Department of Highways and Transportation and a recommendation of the Virginia General Assembly, a list of variables are reported as necessary technical guidelines for local jurisdictions to incorporate into a bikeway system.

The greatest need for a bikeway system is consideration of bicycle safety along Virginia's streets and highways. The Virginia Department of Highways and Transportation's license exams and information fact books incorporate knowledge of bicyclist's rights, for both the bicyclists' and motorists' protection. Bicycle-safety programs also need to be expanded, not only for school children, but for adults as well. Bicycle-traffic citations should also be given when violations occur and require the person to take a bicycle-safety course.

Another recommendation the report supports is that the Virginia Department of Highways and Transportation include a detailed analysis of streets and highways that are planned for future bikeway systems in all Highway Thoroughfare Plans prepared for local governments.

For improved bicycle safety and additional use of bicycles, the plan recommends that the public-transportation system throughout the Tri-Cities Urban Area develop a bicycle-bus transfer system to carry bicyclists across difficult cycling areas, over bridges, through busy business districts, etc.

This report also recommends that further detailed study be assessed using appropriate techniques whenever a locality begins implementation of bicycle-facility planning.

The bikeways noted in this report include current and planned facilities. These bikeways are not, by any means, the final solution to bicycling needs in the Tri-Cities Urban Area. However, this update reflects the progress toward the goal of encouraging the use of the bicycle for commuting purposes in order to alleviate urban congestion, pollution and unhealthfulness. This goal cannot be fully achieved without the willing coordination and implementation of a bikeways plan by all jurisdictions in the Tri-Cities Urban Area.

BIKEWAY SYSTEM PLANNING

A bikeway plan should accommodate as many bicyclists' interests as possible, provide continuity of purpose and satisfy bicyclists' desired corridors of travel. Bikeway planning is commonly thought of as the effort undertaken to develop a bikeway system--a system of bike paths, bike lanes and trails--from wherever they are to where they want to go, particularly those who are using the bicycle for more than casual recreation. Because of the diversity of needs of bicyclists, and the fact that the short, a bikeway system cannot provide for most of the needs of bicyclists. For this reason, a bicycle travel unless it were of the same detail as the street system, for most roads, together with bikeways, must serve as the bicycle-transit system to provide for the travel of bicyclists.

Bicycle planning is more appropriately defined as the effort undertaken to provide for safe and efficient bicycle travel. An effective program is one that is conducted in recognition of the fact that billions of dollars have been spent on a road system to allow people to travel almost any place they wish. Most of these roads are surfaced to accommodate shared use by bicyclists and motorists, and hence, most bicycle travel has occurred and will continue to occur on that system.

Probably the most important effort that could be undertaken to enhance bicycle travel would be improved maintenance and upgrading of existing roads that are used regularly by bicyclists, regardless of whether or not bikeways are designated. This effort requires that increased attention be given to the right-hand portion of roadways where bicyclists are expected to ride. An attempt should be made to improve the width of the surface and to maintain the right-hand portion in a condition suitable for bicycle riding. Also important is the consideration of bicycle needs in the implementation of major construction projects and normal safety and operational improvements. For example, in constructing new roads, adequate width should be provided to permit shared use by motorists and bicyclists. When resurfacing, full shoulders should be resurfaced, as well as traffic lanes. When constructing truck-passing lanes, the paved shoulders should not be sacrificed, causing bicyclists to ride within a truck lane. When placing a roadway-edge stripe, an attempt should be made to provide sufficient room outside the stripe for bicyclists. When considering the resurfacing of roadways for more traffic lanes, the impact on bicycle travel should be assessed. These efforts, to preserve or improve an area for bicyclists to ride, can benefit motorists as well as bicyclists.

Another very important aspect of providing for the needs of bicyclists is in the area of support facilities. If bicyclists are to be used extensively for bicycle travel, the need for bicycle storage at common destination points (e.g., office buildings, shopping centers, schools, etc.) is necessary. The lack of secure bicycle parking can be a serious deterrent to bicycle use.

In order to take maximal advantage of the opportunities for bicycling, bicycle planning should be an integral part of the planning for other transportation modes and land-use development. Only through this effort can adequate provisions for bicycle parking and transit interface (e.g., "bikes on buses", parking at transit terminals and park-and-ride facilities) be assured.

COMMUTING (DEVELOPING THE SYSTEM)

Experts indicate that bike commuting is practical when distances do not exceed six or seven miles. However, some individuals cycle great distances, but they are exceptional. Therefore, the selection of major arterial streets, which carry motorists into the major employment centers from medium- and low-density residential areas, six miles away, should be considered. It is suggested by the Bicycle Institute of America, when planning bike routes to consider using parallel quiet streets which could become alternative routes along major thoroughfares, but will use the major thoroughfares when there is no alternative. Attention should also be given to wide streets that could potentially accommodate an exclusive bike lane (refer to definitions). To simplify the task areas to be the basic essentials and identify only those streets which the bicyclists will use is another consideration.

The Denver, Colorado, City Planning Department, in a study titled "The Bikeway Plan", determined there are three major considerations in evaluating and designing commuter bicycle routes: (1) frequency of travel; (2) travel time; and (3) distance. Results in this plan indicated 60 percent of the bike riders made five round trips per week, mostly to work or school, 40 percent traveled from 11 to 20 minutes one way, and 39 percent traveled from 1 to 3 miles one-way and 26 percent traveled from 3 to 5 miles one-way.

LOCATING BICYCLE FACILITIES

Adaptable locations which might easily be developed into Class I bicycle trails with alterations, other than vehicular thoroughfares, are:

- Abandoned railroad rights-of-way.
- Telephone-line, power-line and gas-line rights-of-way provide more than adequate clearances for bicycle trails. Grades may or may not be within grade specifications.
- Riverbanks, beach fronts, embankments and flood-control levees usually provide long and gently curved scenic locations for bicycle trails.
- National, state, regional and local parks and forest preserves offer scenic and historic locations for bicycle trails, as well as recreational facilities and terminal parking lots for bicyclists.
- Abandoned roadways, when their short lengths might provide adequate services.
- Fire breaks offer sufficient widths and clearances.
- Sidewalks or pedestrian walkways in areas of low-pedestrian volumes may easily be converted to bikeways when permitted by local ordinance.

Bicycle routes could be located almost anywhere where there is available space accessible to the cyclist. While the bicycle is a wheeled vehicle it is still subject to the same forces negotiated over a wide variety of types of terrain and surfaces. Most persons who ride bicycles will take the easiest and quickest route to reach their destination. The bicyclist will take every effort to avoid the most difficult terrain. It is required by law to obey all law and traffic requirements that pertain to operators of motor vehicles. The bikeways presented have been developed to encourage safe bicycling, to provide a safe and convenient mode of travel for any business and allow a recreationalist to tour his city by pedal power.

More than 75 miles of bikeways have been selected through the cooperation and assistance of affected local jurisdiction staffs, highway safety committees, various city and county planning commissions, the Bicycle Association of Southwest Virginia and concerned individual citizens. The majority of bikeways shown will be using existing local streets and highways and link activity and major destination points such as schools, recreation areas, employment centers, historic sites, shopping areas, etc.

Some of the bikeways follow selected collector streets and major thoroughfares for efficient intra-city trips. Individual and group needs for longer recreational and sport-riding trips are accommodated through regional bikeways which connect with proposed routes in other jurisdictions, as well as with commuter routes in the study area.

Both current and planned bikeway facilities for local jurisdictions in the study area are mapped on the reverse side of the brochure and are described as follows:

DESCRIPTION OF BIKWAYS

Improvements to the present system will incorporate added bike routes, bike lanes and additional bike paths throughout the municipal park areas. A short narrative explanation of the types of bikeways planned for Petersburg follows:

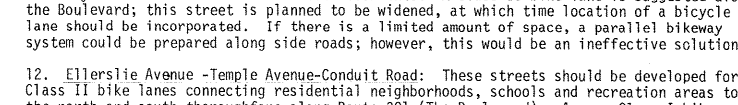
- Washington Street-Wythe Street: This roadway system is presently being redeveloped for oneway traffic circulation, going west along Washington Street and east along Wythe Street. A Class II bikeway lane is proposed, from the beginning of the one-way system in both directions. Parking should be removed along the right side of the street to accommodate the bike lane. The bikeway will act as the City's primary east-west bicycle commuting roadway, carrying persons to Fort Lee, Hopewell and Central State Hospital.
- North and South Sycamore Street: Due to narrow streets, a Class II bike-lane system is suggested due to the large numbers of bicyclists commuting to the central business district, the hospital, library and shopping areas. This is one of the major north-south thoroughfares in the City carrying high volumes of vehicular traffic at all times of the day. The present bikeway is classified as a bike route. A possible alternate parallel route could encompass Monticello and Westover Avenues.
- South Boulevard-Helm-Hill East: Primarily a recreational bike-route system to carry cyclists to the major bicycle lanes along Sycamore Street and Johnson Road.
- Johnson Road-Baylors Lane-Lee Park: This bikeway encompasses an alternate roadway in a north-south direction into the central business district from the southwestern residential neighborhoods, the high school and major city park area. A Class II bike lane designation is suggested. This Class II bike route for Baylors Lane and Virginia Avenue, should be connected to the Lee Park existing bike trails.
- Defense Road-Fort Lee Road-Fernside Avenue-Farmer Street: This bike-route system loops a residential neighborhood in west Petersburg and connects to the Washington-Wythe Streets bike lanes and South West Street loop route. A neighborhood park and fairground area are located along this route, as well as a historic scenic road.
- South Halifax Road-Flank Road-Battlefield Park Subdivision: A Class II bike lane should be developed along the historic Flank Road, and continuation of the bike-route classification in the Battlefield Park neighborhood, as well as along South Halifax Road.
- South Crater Road-Wagner Road-Rivers Road: South Crater Road is being planned for widening at this time. Class II bike lanes should be developed from the Hill area southward to Rivers Road. At this point, Rivers and Wagner Road will act as connecting bike routes to Prince George County and Fort Lee.
- Route 460-Hickory Hill Road-Fort Lee: This roadway is a valuable connecting thoroughfare between the Battlefield Park, Fort Lee and Prince George County. A Class II bike lane is prescribed for Route 460 and bike routes along Hickory Hill Road to Fort Lee.
- Bicycle-Bus Transfer Stations: There is need for three bicycle-transfer locations in Petersburg, one in the central business district to carry bicyclists across into Colonial Heights, another along the Washington Street way developed, and a third at the National Battlefield Park-Fort Lee vicinity.

COLONIAL HEIGHTS

There are no existing bikeways in Colonial Heights; however, in the City's adopted Recreation and Open-Space Master Plan, prepared by the Crater Planning District Commission in 1973, specific streets have been planned for a bikeway system. The City is primarily a bedroom community for local employment elsewhere in the Tri-Cities Urban Area. The planned system includes:

- Boulevard (U.S. 301-1): This street is the City's major local thoroughfare and carries the largest number of commuter and shopping vehicles per day. Along this street are located the City's business and commercial establishments. A Class II bike lane is suggested along Class II Boulevard; this street is planned to be widened, at which time location of a bicycle lane should be incorporated. If there is a limited amount of space, a parallel bikeway system could be prepared along side roads; however, this would be an ineffective solution.
- Ellerslie Avenue-Temple Avenue-Conduit Road: These streets should be developed for Class II bike lanes connecting residential neighborhoods, schools and recreation areas to the north and south thoroughfare along Route 301 (the Boulevard). A spur Class I bike path is proposed for the area between Covington Road and Yacht Basin Drive on Conduit Road where an elementary school, public library and community park are planned.
- Shenwood Drive-Forest View Drive-Falmsort Drive-Billmore Drive: A Class III bike-routes system should encompass this neighborhood and connect the cyclists to the Boulevard bike lanes.
- Lakeview-Springdale-Woodale-Seaboard Coastline Railroad Right-of-Way: A continuation of the Class III system from the Shenwood Hills area, connecting the Lakeview Elementary School to the recently abandoned railroad right-of-way. Where a Class I bike path should be encouraged as a north-south connecting bikeway throughout the City.
- White Bank Park-Fort Cliff: Plans have been prepared for a Class I bike-path and bike-trail system through White Bank Park. This system should link with a Class I system in the Fort Cliff area connecting the two facilities and offering access to Tussing Elementary School. These Class I systems would be accessible to residents by way of Conduit Road bike lanes.
- East Westover Avenue-Lower Conduit-Flora Avenue and the Junior High School: This system will constitute a Class III bike route, encompassing the residential area around the Junior High School. East Westover Avenue should be classified as a Class II bike lane, to safely carry the City's southern bicycle traffic towards the bike lanes on the Boulevard and Conduit Road.
- Carroll Avenue-Chesterfield Avenue-Battery Place-Meridian Avenue: Basically a Class III bike-route system connecting the City's southern neighborhoods with the recreational areas at the stadium.
- Proposed Temple Avenue Extension East and West: This new roadway system will carry commuter motorists and cyclists in both an easterly direction to Fort Lee and Hopewell and a westerly direction to Chesterfield and Ertick. Proposed Class II bike lanes should be developed in conjunction with the Improvements projects.
- Proposed Appomattox River Park: Also indicated for future park usage is a linear park along the river encompassing the landfill area. A series of Class I bike trails should be developed.

BONE SHAKER 1860

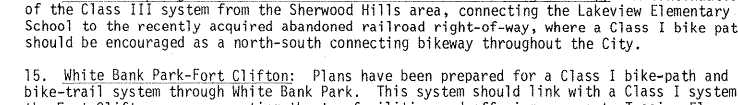


HOPWELL

Hopewell has 13 industrial plant sites locating approximately 5,000 employees commuting from all points in the Tri-Cities Area. With this large number of commuting employees and active recreation program, the City recognizes the need for a planned bikeway system and has adopted an approximately 25-mile bikeways-route system. This system has been incorporated with the entire regional system and presented with a few suggested additions as follows:

- Route 36-Oakland Boulevard-Woodlawn Street-Kinston Churchill Drive: Oakland Boulevard and Winston Churchill Drive represent the City's main east-west thoroughfares connecting the Fort Lee area and Petersburg to the west and the industrial plants and Route 10 to the east. A Class II bicycle lane should be encouraged along these streets. To avoid heavy traffic congestion, a Class II bike lane should be developed along Woodlawn Street and Kinston Churchill Drive. All other local bike routes connect with this system and are funneled in either an eastern or western direction.
- 21, South Mesa-Highway (and Smithfield Avenue-Wilmington Avenue): A Class II bike lane should be developed along this route connecting bicycle traffic from the City's western and northern most residential areas and the high-school recreation area. A Class III bike route along Wilmington Avenue will connect Smithfield Avenue and Woodlawn Street across the Norfolk and Western Railroad tracks.
- 22, Broadway Drive-City Hall-Central Business District-Appomattox Street: Continuing a Class II bicycle lane into the CBD, at which point a Class III loop-bike route carries cyclists around Appomattox Street, Cedar Lane and Brown Avenue and back to East Broadway area. Historic Appomattox Manor is seen along this route.
- 23, Route 10-Central Business District-Hopewell Street-Randolph Road: This system connects Hopewell with Chesterfield and Petersburg. The Appomattox River on the north and south toward Prince George County and places beyond. A Class II bicycle lane should be constructed from the Hopewell Yacht Club at the City's northern boundaries, to the southern City limits beyond Bailey's Creek, at which point a Class III bike route should begin through Prince George County and east across the Benjamin Harrison Bridge.
- 24, Weston Circle-North 4th Avenue-15th Avenue-High Avenue-Arlington Road: This Class III bike route connects the northern City bicycle traffic along Randolph Road and Broadway and the major east-west thoroughfare and bike lane along Winston Churchill Drive. Then continue via Route 156 (Arlington Road) into Prince George County. This system should be upgraded to a Class II level. The Cavalier Square Shopping Center on Washington Street and Courthouse area reached by this bike lane. The loop route around Weston Circle toward the river could be developed as a Class III bicycle route connecting to the Jaycee Park for recreationalists.
- 25, Sewage Treatment Plant: A small neighborhood park is planned for this area containing a Class I bike-trail system.

TANDEM BICYCLE 1889



DIMMIDIE

Dimmidie is presently in need of a bikeway system in the urbanized area of the County to carry commuter and recreational cyclists to and from employment in the Petersburg area, County schools and recreational sites. The proposed bikeway system reads as follows:

- U.S. 1-Route 632-Virginia 226: A Class II bicycle lane should carry cyclists along U.S. Highway 1 from West Washington Street to the city limits. This system acts primarily as a commuter route and as a secondary recreational cycling system. The bikeways connect with adjoining communities wherever possible. The major concern in the County is the narrow roads and their high speeds of traffic. Suggested bikeways are described as follows:

- Route 632-Route 601-Route 276: Development of a Class III bike-route system along Route 601 toward Route 600 where the City of Petersburg is developing the Appomattox River park is suggested. This is a linear historic path through the city's courthouses and paths and bike trails throughout. Virginia 226 should be designated as a Class III bicycle route until Dimmidie County makes specific plans for the development of a county park and recreational site in the Brickwood area, at which time this highway should be developed for Class II bicycle trails. The recreational site should contain Class I bike trails throughout.
- Route 672-Route 613-Defense Road: The bicycle-route designation should continue from Petersburg along historic Defense Road, past the entrance to Central State Hospital into Dimmidie County. A Class III bike-route designation should also be introduced along Route 603, 672 and 613, encompassing the Petersburg National Military Park along Route 613. This will connect to the historic Flank Road coming from Petersburg. This will provide a continued Historic Road Tour through both communities.
- South Johnson Road-Route 672: This will connect Richard Bland College with the Johnson Road bike lane Class II system, and provide a bike-route designation along Route 677 connecting Halifax Road to the Dimmidie bikeways.

PRINCE GEORGE COUNTY

The bicycle plan has investigated the northern portion of Prince George County for a bikeway system. Only this portion of the County is within the urbanized area and the transportation study area has the greatest need for a bikeway system. This system acts primarily as a commuter route and as a secondary recreational cycling system. The bikeways connect with adjoining communities wherever possible. The major concern in the County is the narrow roads and their high speeds of traffic. Suggested bikeways are described as follows:

- Route 156-Route 106-Route 630: The continuation of Arlington Road's Class II bike lane in Hopewell joining Prince George County's Route 156 at the City limits will carry cyclists safely into and out of Hopewell and major employment centers. This bike lane should continue southward to Route 106 and go west by the Beazley Elementary School, courthouses and County Offices, and connect with Route 630 going north toward Route 36 in Hopewell. Route 630, the cyclist may ride along the planned bike lane to the town of Williamsburg. A park on abandoned military property. There are plans for a series of Class I bike trails to be developed at the site.
- Route 106-Route 460-Route 630: A Class III bicycle route should be planned along Route 106 from Route 460; a planned bike lane, eastward toward the section of Route 106 is suggested for another bike lane. Walton Elementary School is located along this road and will carry recreational cyclists to events at the school, as well as link Petersburg, and the planned bike routes along Route 106 and go west by the Beazley Elementary School, courthouses and County Offices, and connect with Route 630 going north toward Route 36 in Hopewell. Route 630, the cyclist may ride along the planned bike lane to the town of Williamsburg. A park on abandoned military property. There are plans for a series of Class I bike trails to be developed at the site.
- Route 444-Route 10/Route 156: After the Route 156 intersection, Route 106 changes its highway number to Route 444 and should be developed as a Class III bike route over to Route 10/Route 156, which is designated as Class II bike lane. Route 10/Route 156 should be designated as a bike route due to the narrowness of the bridge over the James River. This route, however, will undoubtedly attract larger numbers of cyclists going to and from historic Route 5 and the Williamsburg area.

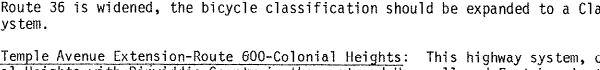
The Prince George County bikeways that are designated Class III bike routes should be expanded into Class II bike lanes when future highway widenings occur, or when a large influx of commuters such as a substitution or employment center, may be developed. The easements and right-of-way should also be considered as possible recreational bike paths.

SOUTHERN CHESTERFIELD COUNTY

A portion of Chesterfield County is located within the Tri-Cities Urban Area and is designated for study by the Virginia Department of Highways and Transportation. The County presently has no bikeway systems, aside from those developed by the Virginia Park Service at Pocahontas State Park and those in the Brundellmill planned community. The examples given here represent an attempt to coordinate the jurisdictional bikeway patterns with southern Chesterfield County.

- Route 600-River Road (Virginia 36): This Class III bike route will carry cyclists from Colonial Heights, westerly along River Road, toward Monticello and Route 600, connecting with the Colonial Heights system. The Appomattox River Park and its bike-trail network. When Virginia Route 36 is widened, the bicycle classification should be expanded to a Class II bike-lane system.
- Proposed Temple Avenue Extension-Route 600-Colonial Heights: This highway system, connecting Colonial Heights with Dimmidie County in the west and Hopewell and Fort Lee in the east, should be expanded to allow a Class II bike-lane system during construction of the roadway.
- Route 628-Chesterfield Avenue: Route 628 from the proposed Temple Avenue circumferential toward Ertick along Chesterfield Avenue should be labeled as a Class III bike-route system.
- Route 625 (Branders Bridge Road)-Colonial Heights City Limits-Lakeview Avenue: This system along Route 625 should be used as a bike route carrying commuters and recreationalists into Colonial Heights. The Lakeview Avenue extension into Chesterfield County should contain a bike-route classification.
- Virginia State University: Throughout the campus, a system for bikeways should be examined and developed with River Road and Chesterfield Avenue as bike lanes around the school. An intra-campus bikeway system could use College Avenue and Hayden Street as double bike-laned streets bisecting the campus and consider bicycle routes along the other streets.

The County's Bikeway Element of the General Plan cites three potential bikeways in the future connecting Chester, Pocahontas Park and Richmond. This Tri-Cities Bikeway Plan merely suggests bikeways that will connect with and continue routes started in other jurisdictions.



IMPLEMENTATION

A plan such as this cannot become effective without an instrument of implementation. The plan's acceptance is the first consideration that requires approval; with this is the need for each local jurisdiction to make a commitment as to its participation in the development of the bikeway systems. A phased plan of development at each local level of government should follow as the next step in the implementation process.

However, topmost in the minds of local decision makers is the need for consideration of funding sources. The Virginia Department of Highways and Transportation notes that "financing is of paramount importance in the development of bikeways if their planning, design and construction is to become a reality" In funding such a large expenditure, it is pertinent for a local government to:

- Review the status of existing programs which may have monies available for bikeways.
- Discuss the use of highway funds to plan, design and construct bikeway facilities and
- Evaluate the feasibility of using alternate sources of funding including a motor-fuel tax, general funds, revenue-sharing funds, general-obligation bonds, a bicycle-excise tax, bicycle-registration and licensing fees or a combination of funding sources to develop bicycle facilities.

SOURCES OF FUNDING

FEDERAL - There are several federal sources of funding for bicycle facilities and programs. Under the Federal-Aid Highway Act of 1976, bicycle and pedestrian facilities may be built as incidental features of highway construction projects. Facilities must serve bicycle traffic which would otherwise use a federal-aid highway route; they must not impair motorist, bicyclist or pedestrian safety, must form a part of a comprehensive bikeway system, be maintained by a public agency and prohibit the use of motorized vehicles in the right-of-way.

Under Section 402 of the Highway Safety Act of 1966, the States were given \$26 million in FY 1978 for the development of highway-safety programs which may include media spots, workshops and staffing. The program is administered by the National Highway Traffic Safety Administration.

Under the Land and Water Conservation Fund Program, the Department of the Interior will allocate \$750 million for FY 1979, and up to \$900 million for FY 1980 to 1989, in grants to Federal, State and local governments for the acquisition and development of recreational facilities including bikeways. Bikeways must be included in the Statewide plan. The amounts of grants for bikeway development vary; the Federal share ranges from 40% to 50%, with the remainder contributed by State and local governments. Projects must be for public use, primarily recreational, and include an agreement to maintain the bikeway for such use for 25 years.

The Environmental Protection Agency provides some funding for bikeway facilities in sewer rights-of-way and at sewage-treatment facilities. Several other Federal agencies provide funds for bicycle-facility development as well.

STATE

State funding sources for bikeways are presently limited. Some funds are allocated each year for improving access to public recreational areas and historical sites by constructing access roads and bikeways. Other funds are available for bikeways built concurrently with highway construction projects under the requirements that such bikeways be part of an overall plan of commuter routes, and that they be constructed with existing rights-of-way or adjacent to existing rights-of-way on land furnished at no cost to the State. Cities and towns are required to participate in the same amount as they do for urban highway or street projects.

LOCAL

Bicycle-sales excise taxes, registration fees, bicycle-license fees, bond issues, donations from civic and business associations, and revenue-sharing funds are several ways a local government could fund a bikeway-construction project. Based on past experience, the use of bicycle licensing is probably the least feasible of the aforementioned methods.

The City of Petersburg enacted a system of bicycle routes at minimal costs. After the streets were chosen, signs, poles and brackets were purchased and the City's traffic staff constructed the placement of the signs in only a few days. The City had no rights-of-way to purchase, nor had to paint any bike-marks on the pavement or on one-street parking. After sufficient amount of observation, an analysis of the bike routes which carry a large number of cyclists was made where safety hazards existed for the introduction of bicycle lanes. The City then began a campaign to fund the added improvements to the system.

A more comprehensive approach to financing bicycle construction involves a bond election and the issuance of local bonds. A bond issue would provide annual appropriations consistent with the locality's program for phasing of bikeway construction. This method, of course, is contingent upon the prevailing public attitude toward bond issues, and the need for bikeway construction.

Finally, local service clubs and organizations wanting to take the initiative to actually build a bikeway should be given that opportunity. Clubs and organizations wishing to construct all or a portion of a particular bike route should arrange a meeting with representatives of the Public Works, Planning and Parks and Recreation Departments to discuss design standards and procedures.

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TRI-CITIES URBAN AREA BIKEWAYS PLAN

LEGEND

- BIKE PATH
- BIKE LANE
- BIKE ROUTE

